KEFI Gold and Copper

Project update

Counting down to production

Metals and mining

In its release of 21 November, KEFI announced the formal approval of the updated finance plan by all the Tulu Kapi syndicate contractors, investors and lenders. Financing continues to be almost entirely at the project or subsidiary level and is consistent with previous guidance. The detailed breakdown of the sources and uses of the US$320m project funding will be detailed at the time of signing definitive documentation, but we have a reasonable understanding based on our detailed modelling and management guidance (see Exhibit 2). An important feature is that nearly all of KEFI's equity contribution is arranged with regional investors who convert into KEFI shares in years 3–4 (FY26 onwards), which (a) avoids unnecessary dilution and (b) provides major regional investors with an opportunity to avoid the devaluation of locally retained earnings. The balance of equity requirements, if any, will be dealt with in H123 after the signing of definitive agreements at year-end.

Year end	Revenue (£m)	PBT* (£m)	EPS* (p)	DPS (p)	P/E (x)	Yield (%)
12/20	0.0	(2.8)	(0.2)	0.0	N/A	N/A
12/21	0.0	(3.4)	(0.2)	0.0	N/A	N/A
12/22e	0.0	(6.9)	(0.2)	0.0	N/A	N/A
12/23e	0.0	(4.0)	(0.1)	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding amortisation of acquired intangibles and exceptional items.

Hostilities cease in northern Ethiopia

The formal announcement of the permanent cessation of hostilities in northern Ethiopia on 2 November, by both the Ethiopian government and regional Tigrayan forces, marks an important milestone in bringing Tulu Kapi into production.

Investors buying Jibal Qutman and Hawiah for free?

In our report Gold stars and black holes, we calculated mean enterprise values of 30.9% and 11.7% of project NPV for companies with projects at the DFS stage and the PEA stage of development, respectively. Applying these percentages to KEFI's projects suggests a pre-funding valuation for KEFI of 0.794p/share based on Tulu Kapi alone, but one of 1.288p/share based on KEFI's trio of projects.

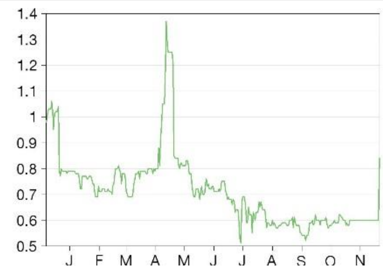
Valuation: Nearly three times current share price

We calculate that KEFI's trio of projects are capable of generating free cash flow of c £84.0m a year from FY26–31, making average (maximum potential) dividends of 0.63p/share possible and valuing KEFI today at at 2.19p/share (cf 2.62p/share previously) fully diluted at the warrant exercise price of 1.6p/share to account for US$11.5m (£9.4m) in equity issuance over the next seven months. This suggests an immediate value for KEFI of £86.3m or US$105.6m. This current valuation reduces to 1.92p/share if all convertible instruments are converted at our valuation of the shares in three to four years. At current metals prices, however, it increases to 5.88p in FY26 (plus a further c 1.18p/share for Guji-Komto), which implies an internal rate of return for investors of 43.1% in sterling terms over the next 13 years.

7 December 2022

Price	**0.76p**
Market cap	**£30m**
	US$1.2245/£
Net cash (£m) as at end-June 2022	2.3
Shares in issue	3,939.1m
Free float	94.8%
Code	KEFI
Primary exchange	AIM
Secondary exchange	N/A

Share price performance



%	1m	3m	12m
Abs	(14.5)	36.6	(27.8)
Rel (local)	(16.9)	33.0	(27.8)
52-week high/low		1.4p	0.5p

Business description

KEFI Gold and Copper is an exploration and development company focused on gold and copper deposits in the highly prospective Arabian-Nubian Shield – namely the Tulu Kapi project in Ethiopia (projected 70% interest) and the Hawiah and Jibal Qutman projects (both 30%) in Saudi Arabia.

Next events

Hawiah PFS	Q422
Tulu Kapi launch	End-2022
Hawiah and Al Godeyer drilling results	Q422
Tulu Kapi commissioning	H224

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Edison profile page

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Tulu Kapi counting down to production

KEFI has made a number of announcements that are pertinent to its future in recent weeks. In the first, it announced the renewal of its Jibal Qutman exploration licence in Saudi Arabia, which opens the way for the commencement of field programmes and environmental studies, etc, ahead of the award of a mining licence. In the second, it announced continued progress with project financings (including final costs and schedules for a combined open pit and underground mine) at Tulu Kapi. In the third, on 21 November, it outlined the final finance plan, which remains consistent with that published on page 6 of its 2021 annual report (ie US$320.0m cf US$300m – see Exhibits 2 and 3). It expects that syndicate member contributions will be adjusted as required.

An important feature is that much of KEFI's equity contribution is arranged with regional investors who convert into KEFI shares at share prices in 2026 and beyond, well after production commences – a most unusual and important feature that demonstrates the depth of KEFI's alignment with other regional investors and with the financial regulators in Ethiopia. The balance, if any, will be dealt with in the months after the signing of definitive agreements at year-end 2022 (cf October previously). We have assumed the exercise of outstanding warrants (at a strike price of 1.6p/share) in early 2023 coinciding with the syndicate-approved sequence for drawdowns and disbursements. Launch by the year end on signing the definitive agreements would be a very successful outcome in the context of macroeconomic uncertainty and in a country in which the working environment might reasonably be described as challenging.

KEFI's announcement of 20 October regarding Tulu Kapi came just three days after the renewal of the Jibal Qutman exploration licence in Saudi Arabia. As well as the original licence, the renewal also gives KEFI access to the 270km^2 Jibal Qutman Exploration Area, including the Jibal Qutman North and Jibal Qutman Southeast exploration licences, which cover a 'significant portion of the highly prospective 'Nabitah-Tathlith' gold belt'. KEFI's target for the completion of a 2Mtpa definitive feasibility study (DFS) by end-Q422/early-Q123 remains on track. In the meantime, it has indicated that project funding for its operating joint venture company Gold & Minerals (G&M) in Saudi Arabia will be finalised as soon as a mining licence has been awarded.

Updated Tulu Kapi mine schedule and opex

KEFI has updated detailed mine engineering and planning for the bulk mining (>90%) and selective mining (<10%) of its ore and waste, as well as now integrating the underground mine with the open pit mine. These have subsequently been built into contractually detailed schedules with its mining contractor. This is an area on which KEFI has focused intensively, not only to reliably measure average grade, but also to manage grade variability during operations, based on tightly defined reserves derived from the wireframing of the entire ore system.

Exhibit 1 compares KEFI's current plans and our assumptions regarding the Tulu Kapi mine with those at the time of our last Outlook note (see Hawiah developing rapidly behind Tulu Kapi, published on 17 March 2022). Commissioning is now expected in late-2024 (cf end-2023 previously) and ramp-up to full production in 2025 (cf 2024 previously) with the life of processing operations therefore continuing into 2034 (cf 2032 previously) and updated costings.

Exhibit 1: Updated Tulu Kapi mine plan and cost assumptions

	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e
Current									
Waste (kt)		15,338	18,737	20,335	19,397	19,180	13,693	6,251	586
Stripping ratio		4.7	5.4	9.7	6.2	7.9	5.6	4.4	3.9
Ore processed (kt)		1,500	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Grade (g/t)		2.33	2.86	2.40	3.10	2.77	2.69	2.45	0.96
Contained gold (koz)		112.3	184.2	154.3	199.2	178.2	173.2	157.4	61.8
Recovery (%)		83.16	93.88	93.80	93.91	93.87	93.85	93.78	100.24
Recovered gold (koz)		93.4	172.9	144.7	187.0	167.2	162.5	147.6	62.0
Operating costs (US$/t processed unless otherwise indicated)									
Mining (US$/t mined)*		3.82	4.22	4.77	5.04	5.09	5.37	6.44	30.12
Milling (oxide, US$/t)		10.75	13.75	13.79	0.00	13.90	13.93	14.01	0.00
Milling (fresh ore, US$/t)		10.54	11.54	11.59	11.65	11.70	11.76	11.81	12.48
Milling (hard ore, US$/t)		0.00	13.75	13.79	13.85	13.92	13.99	14.07	14.13
Total (US$/t)		65.33	66.18	73.17	76.12	75.44	63.20	44.78	29.33
Gold price (US$/oz)		1,617	1,554	1,524	1,524	1,524	1,524	1,524	1,524
Sustaining capex (US$000s)		12,195	13,393	7,915	8,917	5,470	2,630	3,144	0
Previous**									
Waste (kt)	6,450	18,473	19,967	20,193	19,997	18,186	8,265	3,510	0
Stripping ratio	5.8	5.0	9.5	11.0	9.8	7.9	5.3	4.8	N/A
Ore processed (kt)	534	2,126	2,120	2,097	2,042	1,977	1,915	2,003	579
Grade (g/t)	1.87	2.67	2.08	1.95	2.27	2.26	1.87	1.71	0.68
Contained gold (koz)	32.2	182.4	142.1	131.5	148.7	144.0	115.2	110.2	12.6
Recovery (%)	54.92	94.88	91.94	91.45	93.27	92.48	90.68	93.75	179.47
Recovered gold (koz)	17.7	173.1	130.6	120.2	138.7	133.2	104.4	103.3	22.6
Operating costs (US$/t processed unless otherwise indicated)									
Mining (US$/t mined)*	3.00	3.21	3.22	3.28	3.24	3.49	5.03	7.85	N/A
Milling (oxide, US$/t)	9.68	9.68	9.68	9.68	9.68	9.68	9.68	9.68	9.68
Milling (fresh ore, US$/t)	8.26	8.26	8.26	8.26	8.26	8.26	8.26	8.26	8.26
Milling (hard ore, US$/t)	10.09	10.09	10.09	10.09	10.09	10.09	10.09	10.09	10.09
Total (US$/t)	57.39	47.94	47.79	48.94	50.06	51.92	42.16	32.05	26.55
Gold price (US$/oz)	1,681	1,617	1,554	1,524	1,524	1,524	1,524	1,524	1,524
Sustaining capex (US$000s)	5,175	7,773	2,069	3,127	3,236	1,773	2,348	1,995	0

Source: KEFI Gold and Copper, Edison Investment Research. Note: Not all years shown owing to space constraints. *Includes waste. **See our note Hawiah developing rapidly behind Tulu Kapi, published on 17 March 2022.

KEFI's proposed mining method and equipment specification at Tulu Kapi are considered straightforward and technically sound by the lenders' independent technical expert. In this context, it is significant that less than 10% of the total material movement is categorised as 'selective' under the draft mining contract specifications, indicating that the mining methods to be used are generally very standardised.

Readers should note that, while direct comparison may be made between the old and new mining plans with respect to timing and processing rates, owing to the integration of the open pit and underground mining plans, it should not be made with respect to grades, unit mining costs or sustaining capex (which now includes capex for the underground operation). As a consequence, while the superficial increase in sustaining capex is US$26.2m, or 95.3%, over the life of the mine, from US$27.5m to US$53.7m, the underlying increase is a more modest 8.7%, given that the updated figure includes c US$23.8m in capex allocated to the underground project (previously US$38.0m). For those other items for which direct comparison is possible, we estimate that unit oxide milling costs have increased by 44.7% (from US$9.68/t to US$14.01/t average over the life of the mine), fresh ore milling costs have increased by 41.8% (from US$8.26/t to US$11.71/t) and fresh hard ore milling costs have increased by 38.7% (from US$10.09/t to US$13.99/t) – in each case assuming an above inflation escalation of power costs per annum.

Additional costs include a 7% government mining royalty, US$8.88/oz in offsite refining, insurance, transport and offtake costs (unchanged) and an US$11.6m provision for closure costs (cf US$14.5m previously). Onsite general and administrative costs are forecast to be US$80.5m over the life of the mine (cf US$64.4m previously), an increase of 25.0%.

As a result, including offsite costs and the 7% government royalty, we calculate that average cash costs per ounce over the life of the Tulu Kapi operation will have increased by 12.8% relative to our prior estimate from US$889/oz for the open pit and US$664/oz for underground (weighted average US$849/oz) to US$958/oz for the integrated operation.

At the corporate level, we continue to assume head office costs of £1.0m pa (unchanged). A carried-forward tax loss of US$95m has also been applied to future pre-tax profits before tax is payable.

Capex

In its announcement relating to Tulu Kapi, KEFI noted that, owing to global inflationary pressure, its project capital requirement has increased by c US$20m to US$320m (including US$6.6m in pre-production losses), which is (a) modest and (b) unsurprising. Excluding the US$6.6m in pre-production losses during the ramp-up phase of development (KEFI estimate), our capex expectations in November 2022 have increased by 9.6% relative to those at the time of our last note in March 2022, with most of the increase (in absolute terms) attributable to the capital costs associated with the processing plant, as shown below:

Exhibit 2: Tulu Kapi estimated initial capex evolution, July 2017 to November 2022

(US$m unless otherwise indicated)	2017 KEFI plan	Final project models	May 2019 estimates	June 2021 estimates	November 2021 estimates	November 2022 estimates	Variation (%)
	July 2017	April 2018	May 2019	June 2021	November 2021	November 2022	November 2022 cf November 2021
Mining	15.8	28.6	28.6	26.7	29.4	36.1	+22.8
Processing	75.9	100.1	100.1	111.8	140.0	161.8	+15.6
Infrastructure	15.7	15.7	15.7	20.0	20.0	20.0	+0.0
Tailings	18.7	14.9	14.9	32.3	10.8	15.2	+40.7
Indirect	1.8	0.0	0.0	1.8	1.8	1.8	u/c
Owner's costs	13.7	14.7	14.7	18.5	24.1	25.8	+7.1
Community relocation etc	10.0	13.5	13.5	23.0	25.3	24.7	-2.4
Environmental management	1.1	1.3	1.3	1.5	1.1	1.1	u/c
Further contingency	3.3	12.7	3.3	0.0	0.0	0.0	u/c
Other	(15.7)	(20.7)	(15.0)	(16.2)	3.6	(0.8)	-122.2
Additional funding-related costs	15.6	0.0	0.0	0.0	0.0	0.0	u/c
Subtotal	**155.8**	**180.7**	**177.1**	**219.4**	**256.1**	**285.8**	**+11.6**
Working capital	4.0	7.1	3.4	2.7	(2.3)	(0.0)	-100.0
Additional funds required for project funding	33.0	33.9	14.2	*6.1	*30.3	*22.7	-25.1
Cash buffer and other	0.0	17.7	0.0	0.0	1.9	5.0	+163.2
Totals	**192.8**	**239.4**	**194.7**	**228.2**	**286.0**	**313.5**	**+9.6**
Assumed throughput rate (Mtpa)	1.7	1.9–2.1	1.9–2.1	1.9–2.1	1.9-2.1	1.9-2.1	u/c
Capital intensity (US$ per annual tonne)	**113.41**	**119.70**	**97.35**	**114.10**	**143.00**	**156.75**	**+9.6**

Source: Edison Investment Research, KEFI Gold and Copper. Note: *Lenders' upfront fees and other financing costs including pre-production interest. Totals may not add up owing to rounding.

Based on these updated estimates, pre-production capex of US$285.8m (excluding financial items) equates to US$1,746 per annual average ounce of gold production at full capacity (cf US$1,983/oz for the open pit only previously).

Funding mix

Tulu Kapi

KEFI's approach to its funding requirements has been consistent in seeking to share risk with contractors and to minimise dilution. During 2014 and 2015, it revised its inherited DFS as a precursor to opening project construction and mining to international tender, with the specific intent of reducing upfront capex by introducing contract mining. Since then, it has introduced project-level equity (eg the government of Ethiopia and a consortium of Ethiopian investors) as well as senior secured debt provided by banks that are already working in Ethiopia, committed to the country and familiar with local market conditions and many of Tulu Kapi's stakeholders. In this case, the adoption of senior secured debt is considered to be more compatible with Tulu Kapi's consortium of financiers than other forms of finance. It is also anticipated to result in material savings in the cost of debt servicing, administration and other charges, especially during the project's development and start-up period. As such, the development capital requirement of KEFI's Ethiopian subsidiary is anticipated to be financed largely at the project level, approximately as follows:

Exhibit 3: Tulu Kapi sources of funding

Item	Previous (November 2021)*		Current				
	US$m	£m	US$m	Change (%)	Change (US$m)	£m	Percent of total (%)
Senior secured debt	140.0	106.6	140.0	u/c	0.0	114.3	43.8
Subordinated debt linked to offtake rights	45.0	34.2	50.0	+11.1	+5.0	40.8	15.6
Ethiopian government participation at project level	29.0	22.1	28.5	-1.7	-0.5	23.3	8.9
Other project level equity	10.0	7.6	-	-100.0	-10.0	-	-
Subordinated loan convertible into KEFI equity after four years	20.0	15.2	60.0	+200.0	+40.0	49.0	18.8
Contractor charges convertible into KEFI equity after three years	7.0	5.3	-	-100.0	-7.0	-	-
Convertible note	20.0	15.2	30.0	+50.0	+10.0	24.5	9.4
Cost overrun facility	15.0	11.4	-	-100.0	-15.0	-	-
Sub-total	**286.0**	**217.6**	**308.5**	**+7.9**	**+22.5**	**251.9**	**96.4**
Parent company level equity	7.0	5.3	11.5	+64.3	+4.5	9.4	3.6
Pre-commercial production internal cash generation	9.0	6.8	-	-100.0	-9.0	-	-
Total	**302.0**	**229.8**	**320.0**	**+6.0**	**+18.0**	**261.3**	**100.0**

Source: KEFI Gold and Copper, Edison Investment Research. Note: US$1.2245/£ (cf *US$1.3139/£ previously); totals may not add up owing to rounding.

The lender terms have been agreed subject to formal credit committee approval of both banks, one having approved last year and now both processing formal approvals of the updated terms sheet. Otherwise, of particular note is the US$50m increase in the amount of funding from convertible instruments. Importantly however, in both cases, conversion is at KEFI's discretion at the price of KEFI's equity at the time of conversion well after production has commenced and no earlier than FY26, rather than at a pre-arranged price or a discount. Readers' attention is also drawn to the US$11.5m we estimate will need to be raised in additional equity at the listed company level and which could either be raised in the conventional manner, or via the exercise of up to 0.7bn warrants from recent placings at a price of 1.6p/share. Although these are currently, self-evidently, out of the money at the moment, the possibility exists that they may still be exercised in conjunction with other sources of funding being finalised (thus de-risking the project and causing the share price to rise) or on account of existing shareholders wishing to maintain their pro-rata holdings in the company. In both cases, the consequences of these assumptions are considered in the 'Valuation' and 'Sensitivities' sections of the note, below.

Otherwise, the government's policy directive requiring a maximum 50% debt gearing (defined as debt/[debt+equity]) for new projects has been waived in the case of Tulu Kapi, which has prior approval to expand the debt portion of its funding requirement to 70% of the total. In addition, clarification received from the regulator (the National Bank of Ethiopia) indicates that historical exploration spend on the project of c US$95m will be deemed to contribute towards equity for the purposes of this calculation.

Group

KEFI's partner in Saudi Arabia, which funds 70% of all equity requirements at its Saudi operating company, G&M, is the Al Rashid family (a Fortune 100 family), with which KEFI has agreed a broadly similar funding approach to that at Tulu Kapi. At the same time, the Saudi sovereign wealth fund's Saudi Investment Development Fund has publicly stated its priority to provide up to 75% project debt for new mine developments. Accordingly, KEFI's equity share of the development requirements for Hawiah and Jibal Qutman should be just 7.5% (30% of 25%) of combined capital expenditure of both of US$199m (US$160m plus US$39m) – that is, just US$14.9m. In this context, Edison's estimate of the wider group's funding requirement over the next five years, and its satisfaction, is shown in the table below for the development of all three of its projects:

Exhibit 4: KEFI group funding requirement and financing assumptions, by project (US$m)

Project	Tulu Kapi	Jibal Qutman	Hawiah	Total
Assumed KEFI equity interest (%)	**70**	**30**	**30**	
Start year	**2022**	**2023**	**2025**	
Funding requirement	320	39	160	519
Less senior debt	140	29	120	289
Equity risk capital requirement	**180**	**10**	**40**	**230**
Share subscriptions at project level	29	7	28	64
Off-take linked mezzanine finance	50	0	0	50
Cost overrun facility	0	0	0	0
Project level capital	**101**	**3**	**12**	**116**
Subordinated convertible into KEFI shares (Year 4)	60	0	0	60
Mine capex paid in KEFI shares in Year 2	-	0	0	0
Budgeted internal cash generation	-	0	12	12
KEFI convertible note issue	30	0	0	30
KEFI equity	12	3	0	14
Balance	**0**	**0**	**0**	**0**

Source: KEFI Minerals, Edison Investment Research

For the purposes of our valuation (below), Edison has assumed that KEFI will raise US$11.5m in top company-level equity initially in order to satisfy its immediate Tulu Kapi requirements.

Valuation

Company valuation based on project NPVs

At a long-term gold price of US$1,650/oz , on 2 September 2022, KEFI calculated an updated project value for Tulu Kapi (on an attributable basis) of c US$124m, and aggregate updated project values for all three of its near-term projects of c US$269m (see slide 7 of the company's 25 October presentation), which translates into valuations per currently outstanding KEFI share as shown in Exhibit 5, below:

Exhibit 5: KEFI project-based valuations (US cents and pence per KEFI share)

Assets	Tulu Kapi	Tulu Kapi, Jibal Qutman, Hawiah
Gold price (US$/oz)	***1,650**	***1,650**
Current		
NPV_8 (attributable)		
Tulu Kapi (£m)	101	101
Jibal Qutman (£m)		30
Hawiah (£m)		88
US dollars (millions)	**124**	**269**
Pounds sterling (millions)	**101**	**220**
NPV_8 (attributable)		
US cents per share (undiluted)	3.15	6.83
Pence per share (undiluted)	2.57	5.58

Source: KEFI Gold and Copper presentation (25 October 2022), Edison Investment Research (per share data).

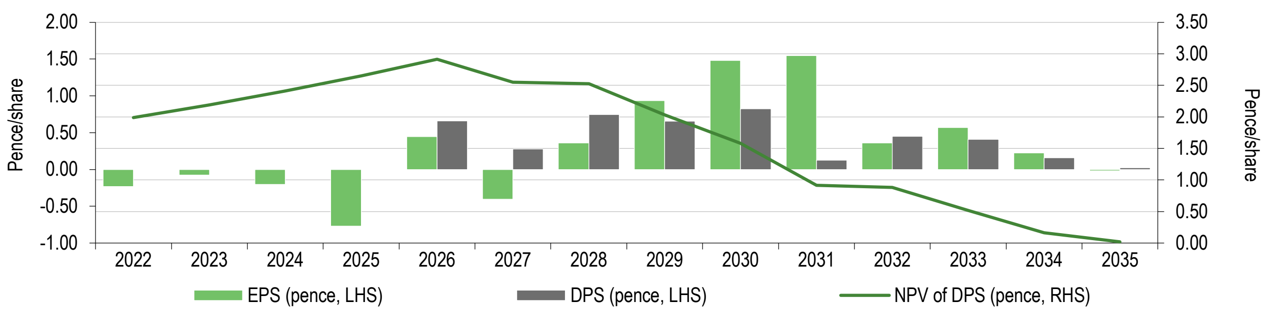
In our report Gold stars and black holes, published in January 2019, we calculated a mean enterprise value of 30.9% of project NPV for companies with projects at the DFS stage of development and 11.7% of project NPV for companies with projects at the PEA stage of development (ie Hawiah). These percentages suggest a sector-derived average pre-funding valuation for KEFI of 0.794p/share based on Tulu Kapi alone and 1.288p/share based on KEFI's trio of projects. Post-funding, these risk-adjusted NPVs jump materially.

Company valuation including corporate actions

In the context of our valuation of KEFI, it is worth noting that the company's financing arrangements will leave it with zero debt at the parent company level, with group subsidiaries directly servicing any senior or mezzanine debt. As a result, dividends to KEFI shareholders from mid-FY25 should be possible. Therefore, we have assumed KEFI will distribute 60% of group cash flow in FY26–30, of which 81% (less a 10% Ethiopian dividend withholding tax) will be attributable to KEFI shareholders. To this end, KEFI has secured a special exemption from exchange controls and has agreed a London clearing account controlled by its TKGM operating subsidiary (note: there are no exchange controls in Saudi Arabia).

Based on our (unchanged) long-term gold price assumptions, we calculate that all three projects are capable of generating a combined free cash flow to KEFI of c £84.0m per year for six years, from 2026 to 2031 (inclusive), based on the mineral resources as last reported in 2021. With average (maximum potential) dividends of 0.63p/share (cf 0.90p/share previously owing to additional dilution) for the five years from 2026 to 2030 inclusive (after deduction of a 19% minority interest), this implies a valuation for KEFI of 2.19p/share when discounted back to FY23 at Edison's customary rate of 10% per annum (cf 2.62p/share to FY22 previously). This valuation then rises to a maximum of 2.92p/share on the cusp of KEFI's (assumed) maiden dividend in FY26:

Exhibit 6: Edison estimate of life of mine KEFI EPS and maximum potential DPS (pence/share), FY22–35e



Source: Edison Investment Research

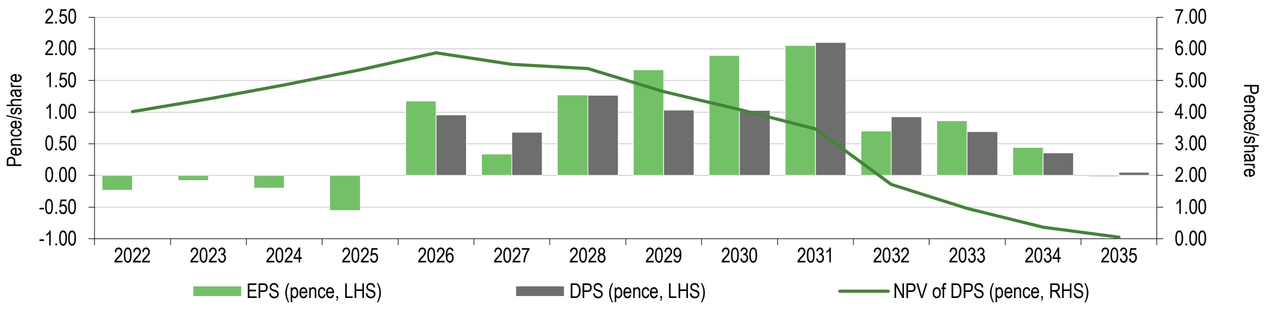
Note that our estimate of KEFI's peak earnings of 1.55p/share in FY30 will put it on a P/E ratio of just 0.6x in that year (relative to its valuation in the same year) or 0.5x its current share price. In the meantime, we estimate that an investment in KEFI shares on 1 January 2023 at a price of 0.76p will generate an internal rate of return for investors of 29.4% over the next 13 years to 2035 in sterling terms. To this may then be added at least a further 1.18p/share in value for Guji-Komto (fully diluted, attributable at a long-term gold price of US$1,524/oz – see On the cusp, published in July 2021).

Sensitivities

Our base case discounted dividend flow valuation of 2.19p is inherently dependent on our gold price assumptions, cash costs, the discount rate, the price at which a future assumed US$11.5m/£9.4m in equity is raised (currently assumed to be the warrant exercise price of 1.6p in the 'base case' valuation) and the prices at which up to US$90m in convertible loans are converted (or not) into equity in no less than three years' time.

Quantitatively, KEFI's most significant valuation sensitivity is towards commodity prices. Whereas our valuation is 2.19p at Edison's long-term gold price of US$1,524/oz, it rises by 101.8%, to 4.42p/share, at currently prevailing metals prices. Moreover, this 4.42p/share valuation itself rises to a peak valuation of 5.88p/share in FY26, as shown in the graph below (directly comparable to Exhibit 6, above):

Exhibit 7: KEFI life of mine EPS and maximum potential DPS (pence/share) at spot metals prices, FY22–35e



Source: Edison Investment Research

In this case, we estimate that an investment in KEFI shares on 1 January 2023 at a price of 0.76p would generate an internal rate of return for investors of 43.1% over the next 13 years to 2035 (fully diluted) in sterling terms (plus 1.18p/share for Guji-Komto).

Our valuation is also dependent on the discount rate applied to the (maximum potential) stream of dividends payable to KEFI's shareholders to the following extent:

Exhibit 8: Discounted dividend valuation sensitivity to discount rate (pence/share)

Discount rate (%)	0%	5%	10%	15%	20%	25%	30%
Valuation (pence)	4.33	3.04	**2.19**	1.62	1.23	0.94	0.74

Source: Edison Investment Research. Note: Valuation date 1 January 2023.

With most of KEFI's equity having already been raised however, its valuation sensitivity to the price at which future equity is likely to be raised is relatively modest:

Exhibit 9: Discounted dividend valuation sensitivity to future equity raising price (pence/share)

Price (pence)	0.400	0.500	0.600	0.700	0.760	0.800	0.900	1.000	1.100	1.200	1.300	1.600	2.280
Valuation (pence/share)	1.58	1.70	1.80	1.88	**1.92**	1.94	1.99	2.03	2.07	2.10	2.13	**2.19**	2.280

Source: Edison Investment Research

Finally, if we assume that US$90m in charges and loans are fully converted into equity at Edison's valuation of KEFI's shares in three to four years' time, this would result in a valuation of 1.92p/share (note that these loans are otherwise assumed in our 'base case' scenario to be retained on KEFI's balance sheet as debt).

Financials

As is typical for exploration companies, KEFI has funded its pre-development activities with regular equity raisings. As a result, it had £2.3m in net cash on its balance sheet as at 30 June 2022 (cf £0.8m of net debt as at 31 December 2021, £1.3m in net debt as at 30 June 2021 and £1.3m in net cash as at 31 December 2020), after £4.0m in operating and investing cash outflows before working capital and after having raised £7.6m (net) in equity over the prior six months. As per our analysis above, we estimate that KEFI will raise a further US$11.5m/£9.4m in equity over the next eight months (which may be achieved by the exercising of outstanding warrants issued in 2021 and

2022 at a price of 1.6p per share, cf the currently prevailing price of 0.76p/share – hence the exercise of such warrants is not assured) in order to fund the development of Tulu Kapi (note: Hawiah, in particular, is assumed to be funded from internal cash generation). The government and local Ethiopian investors will then subscribe their US$28.5m in equity investment at the project level (included in £33.7m in equity financing in our fully consolidated group forecasts in Exhibit 10, below) at the same time that the convertible subscriptions are also closed and ahead of final debt funding of US$190m (as per Exhibit 3). On this basis, we forecast a maximum net debt funding requirement overall for the group of £241.6m or US$295.9m in FY25 (cf £188.1m or US$247.2m in FY24 previously). Obviously, raising funds of this order of magnitude is not without risk for a company with a market capitalisation of £30m and a project that is based in Ethiopia. However, we believe that this risk is mitigated by the fact that the term sheet regarding the terms of KEFI's bank loan is already reported to have been signed and is subject now only to credit approval by the co-lenders (credit approval from the lead bank having already been secured, to our understanding). As such, this form of funding is considered to be more easily compatible with the project's consortium than a number of other alternatives. Hence, KEFI is expecting the signing of definitive agreements at end-2022 and drawdowns/disbursement of equity to commence early in 2023 and the committed debt to be drawn down and disbursed as and when required in 2024.

On the asset side of KEFI's balance sheet, we note that the debt:equity ratio of development spending is approximately 60% of debt (US$190m debt-funded out of US$320m capex) if convertible loans are reported as equity capital (being proposed as convertible at KEFI's election). In addition, we are aware that KEFI is considering whether its write-off of nearly all historical expenditure remains appropriate in the light of project development – ie it is possible that its balance sheet may change significantly as a result of project development commitments.

Exhibit 10: Financial summary

£'000s	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022e	2023e
December	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS											
Revenue	0	0	0	0	0	0	0	0	0	0	0
Cost of Sales	(927)	(2,071)	(1,634)	(2,260)	(3,522)	(4,145)	(2,357)	(2,663)	(2,257)	(2,564)	(1,408)
Gross Profit	(927)	(2,071)	(1,634)	(2,260)	(3,522)	(4,145)	(2,357)	(2,663)	(2,257)	(2,564)	(1,408)
EBITDA	(927)	(2,071)	(1,634)	(2,260)	(3,522)	(4,145)	(2,357)	(2,663)	(2,257)	(2,564)	(1,408)
Operating Profit (before amort. and except.)	(927)	(2,189)	(1,724)	(2,315)	(3,546)	(4,155)	(2,367)	(2,706)	(2,274)	(2,564)	(1,408)
Intangible Amortisation	0	0	0	0	0	0	0	0	0	0	0
Exceptionals	(442)	(379)	(428)	1,944	(2,359)	(180)	(1,465)	174	(47)	(244)	0
Other	0	0	0	0	0	0	0	0	0	0	0
Operating Profit	(1,369)	(2,568)	(2,152)	(371)	(5,905)	(4,335)	(3,832)	(2,532)	(2,321)	(2,808)	(1,408)
Net Interest	4	(413)	(319)	(136)	(75)	(459)	(1,150)	(100)	(1,121)	(4,322)	(2,627)
Profit Before Tax (norm)	(923)	(2,602)	(2,043)	(2,451)	(3,621)	(4,614)	(3,517)	(2,806)	(3,395)	(6,886)	(4,035)
Profit Before Tax (FRS 3)	(1,365)	(2,981)	(2,471)	(507)	(5,980)	(4,794)	(4,982)	(2,632)	(3,442)	(7,130)	(4,035)
Tax	0	0	0	0	0	0	0	0	0	0	0
Profit After Tax (norm)	(923)	(2,602)	(2,043)	(2,451)	(3,621)	(4,614)	(3,517)	(2,806)	(3,395)	(6,886)	(4,035)
Profit After Tax (FRS 3)	(1,365)	(2,981)	(2,471)	(507)	(5,980)	(4,794)	(4,982)	(2,632)	(3,442)	(7,130)	(4,035)
Minority interests	0	115	0	0	0	0	0	0	0	1,355	767
Net income (normalised)	(2,151)	(3,469)	(2,778)	(3,177)	(3,907)	(4,775)	(4,108)	(3,894)	(4,877)	(7,328)	(3,268)
Net income (FRS3)	(1,365)	(2,866)	(2,471)	(507)	(5,980)	(4,794)	(4,982)	(2,632)	(3,442)	(5,776)	(3,269)
Average Number of Shares Outstanding (m)	29.0	56.0	92.8	194.9	315.3	476.1	719.0	1,663.2	2,178.9	3,253.2	4,232.6
EPS - normalised (p)	(7.4)	(6.2)	(3.0)	(1.6)	(1.2)	(1.0)	(0.6)	(0.2)	(0.2)	(0.2)	(0.1)
EPS - normalised and fully diluted (p)	(7.4)	(6.2)	(3.0)	(1.5)	(1.1)	(0.9)	(0.5)	(0.2)	(0.2)	(0.2)	(0.1)
EPS - (IFRS) (p)	(4.7)	(5.1)	(2.7)	(0.3)	(1.9)	(1.0)	(0.7)	(0.2)	(0.2)	(0.2)	(0.1)
Dividend per share (p)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross Margin (%)	-	-	-	-	-	-	-	-	-	-	-
EBITDA Margin (%)	-	-	-	-	-	-	-	-	-	-	-
Operating Margin (before GW and except.) (%)	-	-	-	-	-	-	-	-	-	-	-
BALANCE SHEET											
Fixed Assets	7,152	9,299	11,926	14,053	16,275	18,795	21,239	24,545	28,424	35,152	128,854
Intangible Assets	6,900	9,139	11,845	13,992	16,232	18,757	21,200	24,510	28,361	32,795	33,795
Tangible Assets	252	160	81	61	43	38	39	35	63	71	92,773
Investments	0	0	0	0	0	0	0	0	0	2,286	2,286
Current Assets	4,014	1,061	1,012	3,561	1,047	284	1,454	1,817	685	15,479	315
Stocks	0	0	0	0	0	0	0	0	0	0	0
Debtors	655	335	358	3,056	94	115	1,234	448	291	226	361
Cash	3,279	640	562	410	466	88	150	1,315	394	15,299	0
Other	80	86	92	95	487	81	70	54	0	(46)	(46)
Current Liabilities	(3,363)	(3,202)	(1,995)	(2,067)	(2,852)	(3,727)	(5,211)	(3,125)	(6,791)	(3,385)	(3,385)
Creditors	(3,363)	(3,202)	(1,995)	(2,067)	(2,852)	(3,112)	(4,247)	(3,125)	(5,556)	(2,150)	(2,150)
Short term borrowings	0	0	0	0	0	(615)	(964)	0	(1,235)	(1,235)	(1,235)
Long Term Liabilities	0	0	0	0	0	0	0	0	0	0	(73,773)
Long term borrowings	0	0	0	0	0	0	0	0	0	0	(73,773)
Other long term liabilities	0	0	0	0	0	0	0	0	0	0	0
Net Assets	7,803	7,158	10,943	15,547	14,470	15,352	17,482	23,237	22,318	47,246	52,011
CASH FLOW											
Operating Cash Flow	(1,424)	(2,006)	(2,729)	(2,211)	(51)	(3,291)	(624)	(2,092)	(329)	(5,921)	(1,543)
Net Interest	4	(413)	(319)	(136)	(75)	115	(1,150)	(100)	(1,121)	(4,322)	(2,627)
Tax	0	0	0	0	0	0	0	0	0	0	0
Capex	(877)	(3,133)	(3,507)	(3,014)	(2,625)	(2,835)	(2,690)	(4,389)	(3,064)	(8,524)	(93,702)
Acquisitions/disposals	(1,083)	(750)	0	16	0	0	0	0	54	0	0
Financing	4,735	3,663	6,480	5,192	2,807	5,128	1,640	6,996	826	33,673	8,800
Dividends	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow	1,355	(2,639)	(75)	(153)	56	(883)	(2,824)	415	(3,634)	14,905	(89,072)
Opening net debt/(cash)	(1,924)	(3,279)	(640)	(562)	(410)	(466)	527	814	(1,315)	841	(14,064)
HP finance leases initiated	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	(3)	1	0	(110)	2,537	1,714	1,478	0	0
Closing net debt/(cash)	(3,279)	(640)	(562)	(410)	(466)	527	814	(1,315)	841	(14,064)	75,008

Source: company sources, Edison Investment Research

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